Tutorial 4

Exercise 1

Given the following Java code:

```
def asort(our_list):

    for i in range(len(our_list)):

        for j in range(len(our_list) - 1):
            if our_list[j] > our_list[j+1]:
                # Swap
                our_list[j], our_list[j+1] =
                our_list[j+1], our_list[j]


our_list = [19, 13, 6, 2, 18, 8]
bubble_sort(our_list)
print(our_list)
```

(a) Specify the name of the sorting method carried out by asort() method.

(b) Show the output after execution.

(c) A better algorithm for asort() method is that it can terminate the sorting process earlier once it has found the elements in the array are in ascending order. Modify the asort() method to this early terminating version.

Exercise 2

If the bubble sort is used for the following sequence of integers:

4, 7, 5, 9, 6, 3, 2, 8, 1

show the output of the first six bubbling passes.

Exercise 3

Modify the code given in ***exercise 1*** to implement *selection sort*.